

REMARKS

In the Office Action, the Examiner rejected Claims 1-9, which were all of the then pending claims, under 35 U.S.C. 103 as being unpatentable over the prior art. Specifically, Claims 1, 7 and 8 were rejected as being unpatentable over U.S. Patent 6,745,937 (Walsh, et al.); and Claims 2-6 and 9 were rejected as being unpatentable over Walsh, et al. in view of U.S. Patent 4,817,131 (Thornborough, et al.).

Independent Claim 1 is being amended to better define the subject matter of the claim. Claim 2 is being cancelled because the limitations of the claim are being added to Claim 1. Claims 3 and 4 are being amended to be dependent from Claim 1 rather than the now cancelled Claim 2, and to keep the language of Claims 3 and 4 consistent with the language of amended Claim 1.

In addition, new independent Claim 10 is being added to present an independent claim of intermediate scope, and new Claims 11 and 12, which are dependent from Claim 10, are being added to describe preferred features of the invention.

For the reasons discussed below, Claims 1 and 3-12 patentably distinguish over the prior art and are allowable. The Examiner is, accordingly, requested to reconsider and to withdraw the rejections of Claims 1 and 3-9, and to allow these claims and new Claims 10-12.

The present invention, generally, relates to a communications protocol that effectively reduces or minimizes the power consumption of a client device. As explained in detail in the application, this invention is particularly well suited for small hand held wireless devices.

Today's communications protocols were generally not designed specifically to support small, limited power, wireless, mobile devices. In particular, these communications protocols do not give the user effective control over power consumption.

The present invention effectively addresses this problem. The invention provides a power optimized request response communication method and protocol which allows a user to make trade-offs between power and other scarce and expensive resources and functions.

More specifically, this invention provides an asymmetric two-way request-response communication protocol in which the end user or client transceiver is an active participant in the power management scheme. With the present invention, no power is consumed until a user-initiated client request is made. At that time, the client activates its transceiver and attempts to connect to the server; if the client succeeds, it requests information, receives its response, and disconnects again, totally shutting down the transceiver.

An important feature of the invention is that, if a client communication has not been sent earlier, the client transceiver automatically sends an information request to the server after the expiration of a time-out period. This time out period can be set by an external entity - that is, external of the client device - and preferably either the server or the user can set this time-out period. This is an important, novel and non-obvious approach.

The prior art does not disclose or suggest the use of an external entity to set this time-out period.

In particular, Walsh, et al. describes an electronic hand-held device for inputting and sending requests and for receiving and outputting responses to the request. As the Examiner recognized in the Office Action, however, Walsh, et al. does not teach providing the client transceiver with a time-out period, after which the client transceiver enters a power-on state

and transmits a client communication to the server transceiver.

In order to address this deficiency of Walsh, et al as a reference, the Examiner relies on Thornborough, et al.

Thornborough, et al. discloses an automatic meter reading system in which a processor is periodically powered up for a short time interval to store data. the time period after which the processor powers up is not set by an external entity, though,

In the Office Action, the Examiner argued that "Obviously one can choose either the user/application or the server to define the time-out period." It is not obvious, however, to use an external entity to set this time period. This is because, when the time-period is set this way, the client device itself loses control over its own wake-up time period.

Claim 1 describes the above-discussed feature of this invention. Specifically, Claim 1 describes the features that the client transceiver has a time-out period, after which the client transceiver enters a power-on state and transmits a client communication to the server transceiver, and that this time-out period is set by an entity external of the client transceiver itself.

This feature is of utility because it allows an external entity to control the power consumption of the client transceiver in case the client device does not or is not able to do that itself. For example, this external entity, such as the server, may become aware of circumstances, of which the client is not aware, requiring an adjustment of the power consumption of the client. With the present invention, the external entity can then adjust the above-discussed time-out period, even if the client itself is not aware of the need to make that adjustment.

The other references of record have been reviewed, and these other references, whether they are considered individually or in combination, also do not disclose or suggest this feature of the present invention.

Because of the above-discussed differences between Claim 1 and the prior art, and because of the advantages associated with those differences, Claim 1 patentably distinguishes over the prior art and is allowable. Claims 2-9 are dependent from Claim 1 and are allowable therewith. The Examiner is, consequently, asked to reconsider and to withdraw the rejections of Claims 1 and 3-9 under 35 U.S.C. 103, and to allow these claims.

As mentioned above, new Claim 10 is being added to provide an independent claim of intermediate scope, and new Claims 11 and 12, which are dependent from Claim 10, are being added to describe preferred features of the invention. New Claim 10 describes a number of important features, and for example, this claim describes the manner in which the client, the user and the server can both set the time-out period and override time-out periods set by others. These features provide the client device and the user with considerable flexibility with regard to setting that time-out period. In light of these, and other, differences between Claim 10 and the prior art, this claim, and Claims 11 and 12, also patentably distinguish over the prior art and are allowable.

In view of the foregoing, the Examiner is respectfully requested to reconsider and to withdraw the rejections of Claims 1 and 2-9, and to allow these claims and new Claims 10-12.

If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

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